

Appl. No. : **10/031,818**
Filed : **March 6, 2002**

AMENDMENTS TO THE CLAIMS

1-30. (Cancelled)

Claim 31. (New) An isolated miniature inverted-repeat transposable element (MITE)-like element consisting of a DNA having a nucleotide sequence shown as SEQ ID NO:1.

Claim 32. (New) An isolated transcriptional activation element comprising a MITE-like element consisting of the following DNA (a) or (b) as a transposable element:

(a) a DNA having a nucleotide sequence shown as SEQ ID NO:1;

(b) a DNA having a nucleotide sequence not less than 90% homologous with the nucleotide sequence shown as SEQ ID NO:1, which

- has a size of not more than about 2 kb,
- contains perfect or imperfect terminal inverted repeat sequences in each of the 5' and 3' terminal regions,
- contains a plurality of repetitions of sequences represented by the formula (1): XttgcaaY (wherein X represents g or t and Y represents a or c) or the formula (2): Zatgcaa (wherein Z represents t or a) in the terminal inverted repeat sequences or the intermediate region between the terminal inverted repeat sequences, a continuously or discontinuously repeated manner, and
- is capable of causing duplication of the target sequence: (A)_nG(A)_n [n being an integer of not less than 1] at the site of insertion thereof in a genomic gene.

Claim 33. (New) The isolated transcriptional activation element according to claim 32, wherein the transposable element is a tandem coupling product consisting of the following DNA (a) or (b):

(a) a DNA having a nucleotide sequence shown as SEQ ID NO:1;

(b) a DNA having a nucleotide sequence not less than 90% homologous with the nucleotide sequence shown as SEQ ID NO:1, which

- has a size of not more than about 2 kb,

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- contains perfect or imperfect terminal inverted repeat sequences in each of the 5' and 3' terminal regions,
- contains a plurality of repetitions of sequences represented by the formula (1): XttgcaaY (wherein X represents g or t and Y represents a or c) or the formula (2): Zatgcaa (wherein Z represents t or a) in the terminal inverted repeat sequences or the intermediate region between the terminal inverted repeat sequences, a continuously or discontinuously repeated manner, and
- is capable of causing duplication of the target sequence: (A)_nG(A)_n [n being an integer of not less than 1] at the site of insertion thereof in a genomic gene,

and a MITE-like element consisting of the following DNA (c) or (d):

(c) a DNA having a nucleotide sequence shown as SEQ ID NO:2;

(d) a DNA having a nucleotide sequence not less than 90% homologous with the nucleotide sequence shown as SEQ ID NO:2, which

- has a size of not more than about 1 kb,
- contains a perfect or imperfect terminal inverted repeat sequence in each of the 5' and 3' terminal regions, and
- is capable of causing duplication of TA at the site of insertion thereof in a genomic gene.

Claim 34. (New) The isolated transcriptional activation element according to claim 32, wherein the transposable element consists of a DNA having the nucleotide sequence shown as SEQ ID NO:3.

Claim 35. (New) The isolated transcriptional activation element according to claim 32, wherein the transposable element consists of a DNA having the nucleotide sequence shown as SEQ ID NO:14.

Claim 36. (New) A transgene expression cassette which comprises the transcriptional activation element of any of claims 32 to 35, and a DNA sequence operatively joined to the transcriptional activation element.

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Claim 37. (New) The transgene expression cassette according to claim 36, wherein the DNA sequence operatively joined to the transcriptional activation element comprises a promoter and/or a terminator.

Claim 38. (New) The transgene expression cassette according to claim 36, which further comprises, as the DNA operatively joined to the transcriptional activation element, a desired transgene sequence to be expressed.

Claim 39. (New) A plasmid comprising the transcriptional activation element of any of claims 32 to 35.

Claim 40. (New) A plasmid comprising the transgene expression cassette of any of claims 36 to 38.

Claim 41. (New) A transgenic plant, which contains the transgene expression cassette of any of claims 36 to 38.

Claim 42. (New) The transgenic plant as claimed in claim 41, which is corn, rice, wheat, lily, chrysanthemum, cotton, soybean, beet, potato or carica papaya.

Claim 43. (New) A method of increasing transformation efficiency for transgenic plant cells comprising the step of transforming the plant cells with the plasmid of claim 40.

Claim 44. (New) The method of claim 43 further comprising regenerating the transformed plant cells to produce a transgenic plant.